Technical Publication Transfer

Using:

Northrop Corporation's Data

MIL-D-28000A (IGES)
MIL-M-28001A (SGML)

Quick Short Test Report

20 November 1992

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Prepared for

Electronic Systems Center

[DTIC QUALITY INSPECTED 3

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Quick Short Test Report

20 November 1992

Prepared By
Air Force CALS Test Bed
Wright-Patterson AFB, OH 45433

AFCTB Contact
Gary Lammers
(513) 427-2295

AFCTN Contact
Mel Lammers
(513) 427-2295

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Contents

1. Introduction

1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-Cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluated the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feed back from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation(of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

1.2 Purpose

The purpose of the informal test, reported in this QSTR, was
to analyze Northrop Corporation's interpretation and use of
the CALS standards in transferring technical publication
data.   Northrop used its CALS Technical Data Interchange
System to produce data, in accordance with the standards,
and delivered it to the AFCTN technical staff on a 9-track
magnetic tape.

2. Test Parameters

Test Plan: AFCTB 92-083

Date of
Evaluation: 20 November 1992

Evaluator: George Elwood
                              Air Force CALS Test Bed
                              DET 2 HQ ESC/ENCP
                              4027 Colonel Glenn Hwy
                              Suite 200
                              Dayton, OH 45431-1672

Data
Originator: John G. Bean
                              Northrop Corporation
                              B-2 Division
                              8900 East Washington Boulevard
                              Pico Rivera, CA 90660

Data
Description: Technical Manual Test
                              1   Document Declaration file
                              1   Document Type Definition (DTD)
                              103 Initial Graphics Exchange Specification
                                       (IGES) files
                              1   Standard Generalized Markup Language
                                       (SGML) file

Data
Source System:

          IGES
                    HARDWARE
                              Unknown
                    SOFTWARE
                              Unknown

          Text/SGML
                    HARDWARE
                              Unknown
                    SOFTWARE
                              Unknown

Evaluation Tools Used:

          MIL-STD-1840A (TAPE)

               SUN 3/280

                    AFCTN *Tapetool v1.2.8 UNIX*
                    XSoft *CAPS/CALS v40.4*

          MIL-D-28000 (IGES)

               Sun SparcStation 2

                    IGES Data Analysis (IDA) *Parser/Verifier*
                    IDA *IGESView v3.0*
                    International TechneGroup Incorporated
                          (ITI) *IGES/Works v1.3.0*
                    Rosetta Technologies *Preview v3.2*

               Cheetah Gold 486

                    AUTODESK *AutoCAD 386 R11*
                    CADKEY *Cadkey v4.06*
                    IDA *IGES Parser/Verifier*

          MIL-M-28001 (SGML)

               Cheetah Gold 486

                    Exoterica *XGMLNormalizer v1.2e3.2*

Standards
Tested: MIL-STD-1840A
                  MIL-D-28000A
                  MIL-M-28001A

3. 1840A Analysis

3.1 External Packaging

The tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in a box in accordance with ASTM D 3951. The exterior of the box was marked with the magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3.

The tape was enclosed in a barrier bag as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed a lack of the label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1. Some 9-track tape units require this BPI to be set manually. Enclosed in the box was a packing list showing all files recorded on the tape.

3.2 Transmission Envelope

The 9-track tape received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

3.2.1 Tape Formats

The tape was run through the AFCTN *Tapetool v1.2.8* utility. No errors were encountered while evaluating the contents of the tape labels.

3.2.2 Declaration and Header Fields

No errors were found in the Document Declaration file or data file header.

4. IGES Analysis

The tape contained 103 IGES files. All of these files were the same for this test. A sample file, D001Q006 was selected for the detailed evaluation although ten percent of the files were tested with IDA's *Parser/Verifier*.

The files were inspected for the required CALS statement defined in MIL-D-28000A. This statement was found.

The selected files were tested using IDA's *Parser/Verifier* set for CALS IGES Class I. No CALS errors were reported during this process. A basic IGES error was reported where two lines did not touch. The complete verifier log is included in the Appendix to this report.

The files converted using AUTODESK *AutoCad R11*, displayed and printed. Other than the image being partly off the screen and some non-supported entities, no problems were encountered.

The files were converted using Cadkey's *Cadkey ig2c* converter without a reported error. The resulting files were displayed and printed without a problem.

The files were imported into IDA's *IGESView* without any reported problems. The image appeared correct and printed without a problem.

The files were imported into ITI's *IGESWorks* without a reported error. The image displayed correctly.

The files were converted using Rosetta Technologies' *Prepare* and the resulting files were read into *Preview* without a problem.

The IGES files on this tape meet the CALS MIL-D-28000A specification.

5. SGML Analysis

The tape contained one text file, one DTD, and one output specification. The DTD was parsed without any reported errors using Exoterica's *XGMLNormalizer*. The parsed DTD was used to parse the text file which also reported no errors.

The DTD and text files were also parsed using Datalogics' *ParserStation*, SoftQuad's *Author/Editor*, and the ArborText parser. No errors were reported.

It was not possible to publish a page from the document because the output specification was old and the ArborText system would not accept the file.

The SGML files meet the CALS MIL-M-28001A specification.

6. Raster Analysis

No Raster files were included on this tape.

7. CGM Analysis

No Computer Graphics Metafile (CGM) files were included on this tape.

8. Conclusions and Recommendations

In summary, the tape from Northrop Corporation was correct. The tape could be read properly using the AFCTN *Tapetool* and XSoft *CAPS* tape utility without a reported error. The physical structure of the tape meets the CALS MIL-STD-1840A requirements.

The tape contained 103 IGES files which were all the same. This files were parsed with no reported CALS errors. The IGES files meet the CALS MIL-D-28000A specification.

The DTD and text files were parsed without a reported error. These SGML files meet the CALS MIL-M-28001A specification.

The tape from Northrop Corporation meets the CALS MIL-STD-1840A requirements.

9. Appendix A - Tapetool Report Logs

9.1 Tape Catalog

Air Force CALS Test Network Catalog Evaluation - Version 1.2; Release Number 8

```
Standards referenced:
  MIL-STD-1840A (1987) - Automated Interchange of Technical Information
  ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
                      for Information Interchange
  ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII
```

Fri Nov 20 12:48:41 1992

MIL-STD-1840A File Catalog

File Set Directory: /cals/tapetool8/Set113

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Extracted
D001T001	Text	D/00260	02048/000063	Extracted
D001G002	DTD	D/00260	02048/000014	Extracted
D001H003	Output Specification	D/00260	02048/000088	Extracted
D001Q004	IGES	F/00080	02000/000035	Extracted
D001Q005	IGES	F/00080	02000/000035	Extracted
D001Q006	IGES	F/00080	02000/000035	Extracted
D001Q007	IGES	F/00080	02000/000035	Extracted

<<<<< PART OF LOG REMOVED HERE >>>>>

D001Q104	IGES	F/00080	02000/000035	Extracted
D001Q105	IGES	F/00080	02000/000035	Extracted
D001Q106	IGES	F/00080	02000/000035	Extracted

Catalog Process terminated normally.

9.2 Tape Evaluation Log

Air Force CALS Test Network Tape Evaluation - Version 1.2; Release Number 8
  Standards referenced:
    ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
                        for Information Interchange
    ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Fri Nov 20 12:45:23 1992

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1ITDS01   CONTROLLER   4

  Label Identifier: VOL1
  Volume Identifier: ITDS01
  Volume Accessibility:
  Owner Identifier:
  Label Standard Version: 4

HDR1D001   ITDS0100010001000100 92316 92316 000000   CONTROLLER

  Label Identifier: HDR1
  File Identifier: D001
  File Set Identifier: ITDS01
  File Section Number: 0001
  File Sequence Number: 0001
  Generation Number: 0001
  Generation Version Number: 00
  Creation Date: 92316
  Expiration Date: 92316
  File Accessibility:
  Block Count: 000000
  Implementation Identifier: CONTROLLER

HDR2D0204800260   00

  Label Identifier: HDR2
  Recording Format: D
  Block Length: 02048
  Record Length: 00260
  Offset Length: 00

*********** Tape Mark **************

  Actual Block Size Found = 2048 Bytes.

  Number of data blocks read = 1.

*********** Tape Mark **************

EOF1D001   ITDS0100010001000100 92316 92316 000001   CONTROLLER

  Label Identifier: EOF1
  File Identifier: D001
  File Set Identifier: ITDS01
  File Section Number: 0001
  File Sequence Number: 0001
  Generation Number: 0001
  Generation Version Number: 00
  Creation Date: 92316
  Expiration Date: 92316
  File Accessibility:
  Block Count: 000001
  Implementation Identifier: CONTROLLER

EOF2D0204800260   00

  Label Identifier: EOF2
  Recording Format: D
  Block Length: 02048
  Record Length: 00260
  Offset Length: 00

*********** Tape Mark **************

HDR1D001T001   ITDS0100010002000100 92316 92316 000000   CONTROLLER

  Label Identifier: HDR1
  File Identifier: D001T001
  File Set Identifier: ITDS01
  File Section Number: 0001
  File Sequence Number: 0002
  Generation Number: 0001
  Generation Version Number: 00
  Creation Date: 92316
  Expiration Date: 92316
  File Accessibility:
  Block Count: 000000
  Implementation Identifier: CONTROLLER

HDR2D0204800260   00

   Label Identifier: HDR2
   Recording Format: D
   Block Length: 02048
   Record Length: 00260
   Offset Length: 00

************ Tape Mark ***************

   Actual Block Size Found = 2048 Bytes.

   Number of data blocks read = 63.

************ Tape Mark ***************

EOF1D001T001   ITDS0100010002000100 92316 92316 000063   CONTROLLER

   Label Identifier: EOF1
   File Identifier: D001T001
   File Set Identifier: ITDS01
   File Section Number: 0001
   File Sequence Number: 0002
   Generation Number: 0001
   Generation Version Number: 00
   Creation Date: 92316
   Expiration Date: 92316
   File Accessibility:
   Block Count: 000063
   Implementation Identifier: CONTROLLER

EOF2D0204800260   00

   Label Identifier: EOF2
   Recording Format: D
   Block Length: 02048
   Record Length: 00260
   Offset Length: 00

************ Tape Mark ***************

HDR1D001G002   ITDS0100010003000100 92316 92316 000000   CONTROLLER

   Label Identifier: HDR1
   File Identifier: D001G002
   File Set Identifier: ITDS01
   File Section Number: 0001

```
  File Sequence Number: 0003
  Generation Number: 0001
  Generation Version Number: 00
  Creation Date:  92316
  Expiration Date:  92316
  File Accessibility:
  Block Count: 000000
  Implementation Identifier:   CONTROLLER
```

HDR2D0204800260   00

```
  Label Identifier: HDR2
  Recording Format: D
  Block Length: 02048
  Record Length: 00260
  Offset Length: 00
```

************ Tape Mark ***************

  Actual Block Size Found = 2048 Bytes.

  Number of data blocks read = 14.

************ Tape Mark ***************

EOF1D001G002   ITDS0100010003000100 92316 92316 000014   CONTROLLER

```
  Label Identifier: EOF1
  File Identifier: D001G002
  File Set Identifier: ITDS01
  File Section Number: 0001
  File Sequence Number: 0003
  Generation Number: 0001
  Generation Version Number: 00
  Creation Date:  92316
  Expiration Date:  92316
  File Accessibility:
  Block Count: 000014
  Implementation Identifier:   CONTROLLER
```

EOF2D0204800260   00

```
  Label Identifier: EOF2
  Recording Format: D
  Block Length: 02048
  Record Length: 00260
  Offset Length: 00
```

___

*********** Tape Mark **************

HDR1D001H003   ITDS0100010004000100 92316 92316 000000 CONTROLLER

   Label Identifier: HDR1
   File Identifier: D001H003
   File Set Identifier: ITDS01
   File Section Number: 0001
   File Sequence Number: 0004
   Generation Number: 0001
   Generation Version Number: 00
   Creation Date: 92316
   Expiration Date: 92316
   File Accessibility:
   Block Count: 000000
   Implementation Identifier: CONTROLLER

HDR2D0204800260   00

   Label Identifier: HDR2
   Recording Format: D
   Block Length: 02048
   Record Length: 00260
   Offset Length: 00

*********** Tape Mark **************

   Actual Block Size Found = 2048 Bytes.

   Number of data blocks read = 88.

*********** Tape Mark **************

EOF1D001H003   ITDS0100010004000100 92316 92316 000088 CONTROLLER

   Label Identifier: EOF1
   File Identifier: D001H003
   File Set Identifier: ITDS01
   File Section Number: 0001
   File Sequence Number: 0004
   Generation Number: 0001
   Generation Version Number: 00
   Creation Date: 92316
   Expiration Date: 92316
   File Accessibility:
   Block Count: 000088
   Implementation Identifier: CONTROLLER

___

EOF2D0204800260   00

   Label Identifier: EOF2
   Recording Format: D
   Block Length: 02048
   Record Length: 00260
   Offset Length: 00

************ Tape Mark ***************

HDR1D001Q004   ITDS0100010005000100 92316 92316 000000   CONTROLLER

   Label Identifier: HDR1
   File Identifier: D001Q004
   File Set Identifier: ITDS01
   File Section Number: 0001
   File Sequence Number: 0005
   Generation Number: 0001
   Generation Version Number: 00
   Creation Date: 92316
   Expiration Date: 92316
   File Accessibility:
   Block Count: 000000
   Implementation Identifier: CONTROLLER

HDR2F0200000080   00

   Label Identifier: HDR2
   Recording Format: F
   Block Length: 02000
   Record Length: 00080
   Offset Length: 00

************ Tape Mark ***************

   Actual Block Size Found = 2000 Bytes.

   Number of data blocks read = 35.

************ Tape Mark ***************

EOF1D001Q004   ITDS0100010005000100 92316 92316 000035   CONTROLLER

   Label Identifier: EOF1
   File Identifier: D001Q004
   File Set Identifier: ITDS01
   File Section Number: 0001
   File Sequence Number: 0005

Generation Number: 0001
Generation Version Number: 00
Creation Date: 92316
Expiration Date: 92316
File Accessibility:
Block Count: 000035
Implementation Identifier: CONTROLLER

EOF2F0200000080   00

  Label Identifier: EOF2
  Recording Format: F
  Block Length: 02000
  Record Length: 00080
  Offset Length: 00

************ Tape Mark ***************

                    <<<<< PART OF LOG REMOVED HERE >>>>>

************ Tape Mark ***************

HDR1D001Q106   ITDS0100010107000100 92316 92316 000000   CONTROLLER

  Label Identifier: HDR1
  File Identifier: D001Q106
  File Set Identifier: ITDS01
  File Section Number: 0001
  File Sequence Number: 0107
  Generation Number: 0001
  Generation Version Number: 00
  Creation Date: 92316
  Expiration Date: 92316
  File Accessibility:
  Block Count: 000000
  Implementation Identifier: CONTROLLER

HDR2F0200000080   00

  Label Identifier: HDR2
  Recording Format: F
  Block Length: 02000
  Record Length: 00080
  Offset Length: 00

************ Tape Mark ***************

  Actual Block Size Found = 2000 Bytes.

Number of data blocks read = 35.

************ Tape Mark ***************

EOF1D001Q106   ITDS0100010107000100 92316 92316 000035   CONTROLLER

   Label Identifier: EOF1
   File Identifier: D001Q106
   File Set Identifier: ITDS01
   File Section Number: 0001
   File Sequence Number: 0107
   Generation Number: 0001
   Generation Version Number: 00
   Creation Date: 92316
   Expiration Date: 92316
   File Accessibility:
   Block Count: 000035
   Implementation Identifier: CONTROLLER

EOF2F0200000080   00

   Label Identifier: EOF2
   Recording Format: F
   Block Length: 02000
   Record Length: 00080
   Offset Length: 00

************ Tape Mark ***************

************ Tape Mark ***************

############# End of Volume ITDS01 #############

############# End Of Tape File Set #############

Deallocating /dev/rmt0...

Tape Import Process terminated with 0 error(s), 0 warning(s),
and 0 note(s).

9.3 Tape File Set Validation Log

Air Force CALS Test Network File Set Evaluation - Version 1.2; Release Number 8
  Standards referenced:
    MIL-STD-1840A (1987) - Automated Interchange of Technical Information

Fri Nov 20 12:48:42 1992

MIL-STD-1840A File Set Evaluation Log

File Set: Set113

Found file: D001
Extracting Document Declaration Header Records...
Evaluating Document Declaration Header Records...

srcsys: Gary Lammers, Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT, TechneCenter, 402
Glen Highway, Dayton, OH 45431-1601
srcdocid: 1B-2A-2-95JG-10-1
srcrelid: NONE
chglvl: ORIGINAL
dteisu: 19920819
dstsys: John G, Bean, ITDS User System Program Manager, Northrop Corporation, B-2 Divi
L595/XY, (310) 942-6553
dstdocid: 1B-2A-2-95JG-10-1
dstrelid: NONE
dtetrn: 19921111
dlvacc: NONE
filcnt: T1, H1, G1, Q103
ttlcls: UNCLASSIFIED
doccls: UNCLASSIFIED
doctyp: JOB GUIDE
docttl: CREW ESCAPE AND SAFETY EJECTION SEATS

Found file: D001T001
Extracting Text Header Records...
Evaluating Text Header Records...

srcdocid: 1B-2A-2-95JG-10-1
dstdocid: 1B-2A-2-95JG-10-1
txtfilid: W
doccls: UNCLASSIFIED
notes: NONE

Saving Text Header File: D001T001_HDR
Saving Text Data File: D001T001_TXT

Found file: D001G002
Extracting DTD Header Records...
Evaluating DTD Header Records...

srcdocid: 1B-2A-2-95JG-10-1
dstdocid: 1B-2A-2-95JG-10-1
notes: NONE

Saving DTD Header File: D001G002_HDR
Saving DTD Data File: D001G002_DTD

Found file: D001H003
Extracting Output Specification Header Records...
Evaluating Output Specification Header Records...

srcdocid: 1B-2A-2-95JG-10-1
dstdocid: 1B-2A-2-95JG-10-1
notes: NONE

Saving Output Specification Header File: D001H003_HDR
Saving Output Specification Data File: D001H003_OS

Found file: D001Q004
Extracting IGES Header Records...
Evaluating IGES Header Records...

srcdocid: 1B-2A-2-95JG-10-1
dstdocid: 1B-2A-2-95JG-10-1
txtfilid: W
figid: NONE
srcgph: B2AJG9510-0005
doccls: UNCLASSIFIED
notes: NONE

Saving IGES Header File: D001Q004_HDR
Saving IGES Data File: D001Q004_IGS

Found file: D001Q005
Extracting IGES Header Records...
Evaluating IGES Header Records...

srcdocid: 1B-2A-2-95JG-10-1
dstdocid: 1B-2A-2-95JG-10-1
txtfilid: W
figid: NONE
srcgph: B2AJG9510-0006A
doccls: UNCLASSIFIED

notes: NONE

Saving IGES Header File: D001Q005_HDR
Saving IGES Data File: D001Q005_IGS

<<<<< *PART OF LOG REMOVED HERE* >>>>>

Found file: D001Q106
Extracting IGES Header Records...
Evaluating IGES Header Records...

srcdocid: 1B-2A-2-95JG-10-1
dstdocid: 1B-2A-2-95JG-10-1
txtfilid: W
figid: NONE
srcgph: B2AJG9512-0014
doccls: UNCLASSIFIED
notes: NONE

Saving IGES Header File: D001Q106_HDR
Saving IGES Data File: D001Q106_IGS

Evaluating numbering scheme...
No errors were encountered during numbering scheme evaluation.
Numbering scheme evaluation complete.

Checking file count...
No errors were encountered during file count verification.
File Count verification complete.

No errors were encountered in Document D001.

No errors were encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

9.4 Other Tape Reading Logs

No errors were reported by XSoft *CAPS's read1840A* tape utility.

10. Appendix B - Detailed IGES Analysis

10.1 File D001Q006

10.1.1 Parser/Verifier Log

```
        *** IGES DATA FILE ANALYSIS ***
        ***         AUGUST 1991         ***
        ***    IGES Data Analysis       ***
        ***       (708) 449-3430        ***

 Input file is \9283\q006.igs

 Checking for conformance to CALS Class I

 Today is November 20, 1992  4:03 PM

*** File and Product Name Information ***

   File name from sender    = 'handlerev.t2.igs'
   File creation Date.Time  = '921111.130802'
   Model change Date.Time   = ''
   Author                   = 'NORTHROP B2 ITDS CTB'
   Department               = ''
   Product name from sender = 'handlerev.t2.igs'
   Destination product name = 'handlerev.t2.igs'

*** Parameter Delimiters ***

   Delimiter  = ','
   Terminator = ';'

*** Originating System Data ***

   System ID            = 'ITDS CONVERTER: GEF_IGES'
   Preprocessor version = '1.0'
   Specification version = 6 (IGES 4.0)

*** Precision levels ***
   Integer bits =    32
   Floating point  -  Exponent =    38  Mantissa =     6
   Double precision - Exponent =   308  Mantissa =    15

*** Global Model Data ***
```

```
    Model scale              =  1.0000E+000
    Unit flag                =  1
    Units                    =  'IN'
    Line weights             =  1
    Maximum line thickness   =  5.455400E-003
    Minimum line thickness   =  5.455400E-003
CAUTION 2317: Maximum line thickness equal to minimum thickness.
    Granularity              =  1.000000E-003
    Maximum coordinate       =  6.693571E+000
```

Drafting standard applicable to original data is not specified.

*** Status Flag Summary ***

Blank status:	Visible	219
	Blanked	0
Independence:	Independent	207
	Physically Subordinate	9
	Logically Subordinate	3
	Totally Subordinate	0
Entity use:	Geometry	196
	Annotation	23
	Definition	0
	Other	0
	Logical/Positional	0
	2D parametric	0
	Not Specified	0
Hierarchy:	Structure DE applies	0
	Subordinate DE applies	219
	Hierarchy property applies	0
	Not Specified	0

*** Entity Occurrence Counts ***

Entity	Form	Level	Count	Type
100	0	0	126	Circular arc
104	1	0	2	Conic arc - ellipse
106	11	0	11	Copious data - Piecewise planar, linear string(2D path)
106	63	0	9	Simple closed planar curve
110	0	0	44	Line
124	0	0	2	Transformation matrix

212	0	0	12	General note
230	0	0	9	Sectioned area (Standard Crosshatching)
404	0	0	1	Drawing
406	16	0	1	Property - Drawing size
406	18	0	1	Property - Intercharacter spacing
410	0	0	1	View - Orthographic parallel

*** Entity Count by Level ***

Level	Count
0	219

*** Labeling Information ***

0% of the entities are labeled.

Unlabeled   219

*** Line Fonts Used in Data ***

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
126	-	2	20	-	44	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

116	118	120	122	124	125	126	128	
-	-	-	-	2	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

130	132	134	136	138	140	142	144	
-	-	-	-	-	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line

```
-    -    -    -    -    -    -    -   Dotted
-    -    -    -    -    -    -    -   User defined
```

*** Line Widths Used in Data ***

Weight	Count	Width
Defaulted	219	(0.0055)

*** Colors Used in Data ***

Defaulted	6
Blue	213

```
*******************************
******  ENTITY ANALYSIS  ******
*******************************
```

*** Entity type: 100

*** Entity type: 104

WARNING 2265: Start point off conic at D   321 by 5.045419E-003.
WARNING 2039: End point off conic at D   321 by 5.045419E-003.

*** Entity type: 106

*** Entity type: 110

--   44 lines averaging 2.407918E-001 units --

*** Entity type: 124

2 transformation matrices, 2 non-zero translations.
NOTE   2341: 2 matrices contain translation information.

*** Entity type: 212

        12 text strings in data file.
        Average text aspect ratio in file is 0.8927706.
        Minimum text aspect ratio in file is 0.8918800.
        Maximum text aspect ratio in file is 0.8935355.

        FONTS USED IN FILE

```
        FONT    COUNT   NAME

         1       12    Default ASCII Style
```

*** Entity type: 230

*** Entity type: 404

Drawing at D   5 contains 1 views.
Drawing at D   5 contains 0 annotation entities.

*** Entity type: 406

*** Entity type: 410

Scale of view at D   1 is 1.000000E+000.
Orthographic View entity at D   1 has 0 clipping planes specified.
    XMIN = Not Set   XMAX = Not Set
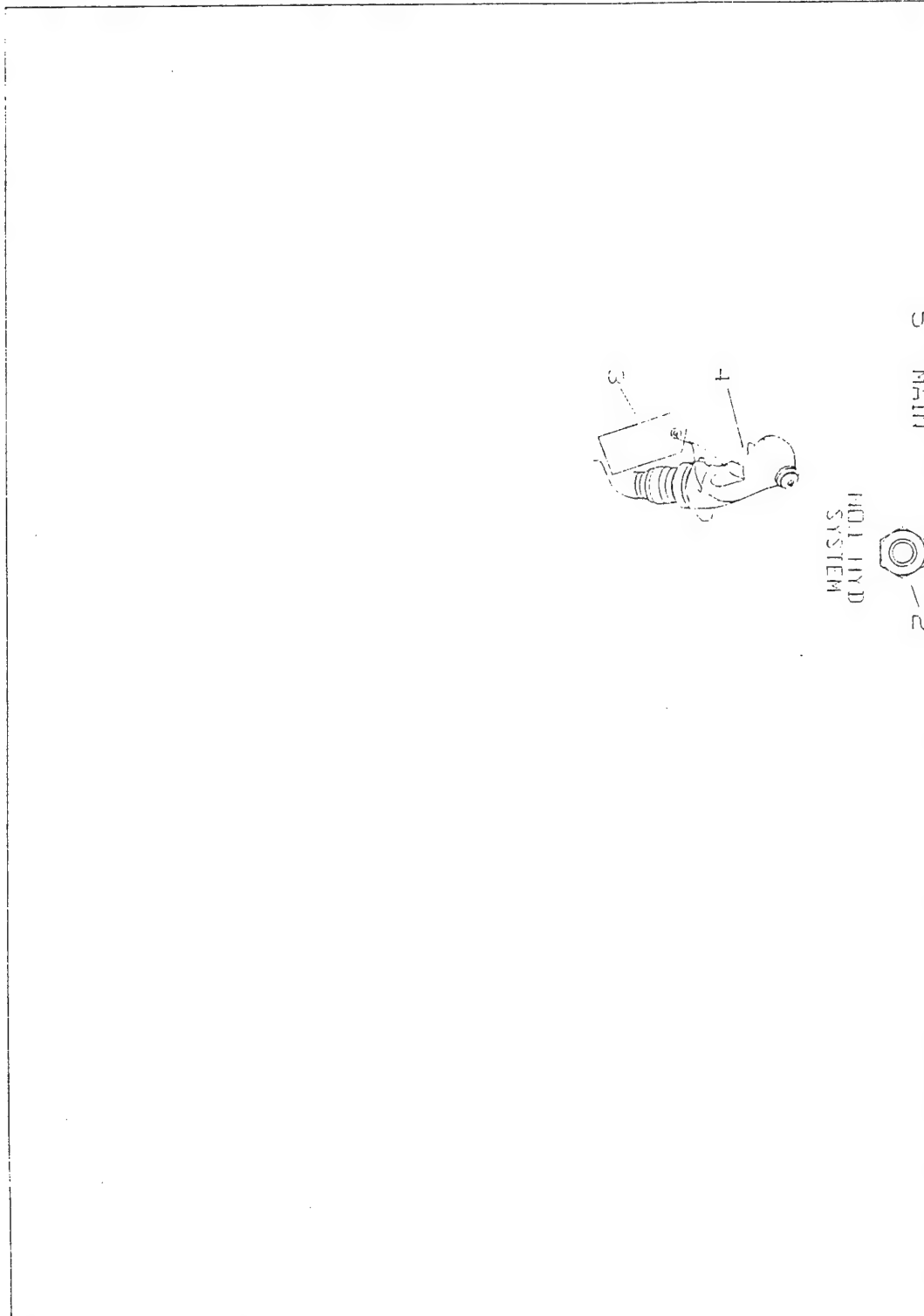   YMIN = Not Set   YMAX = Not Set
    ZMIN = Not Set   ZMAX = Not Set

*** Message Summary ***

2015: 2 Mathematicaly incorrect definitions.
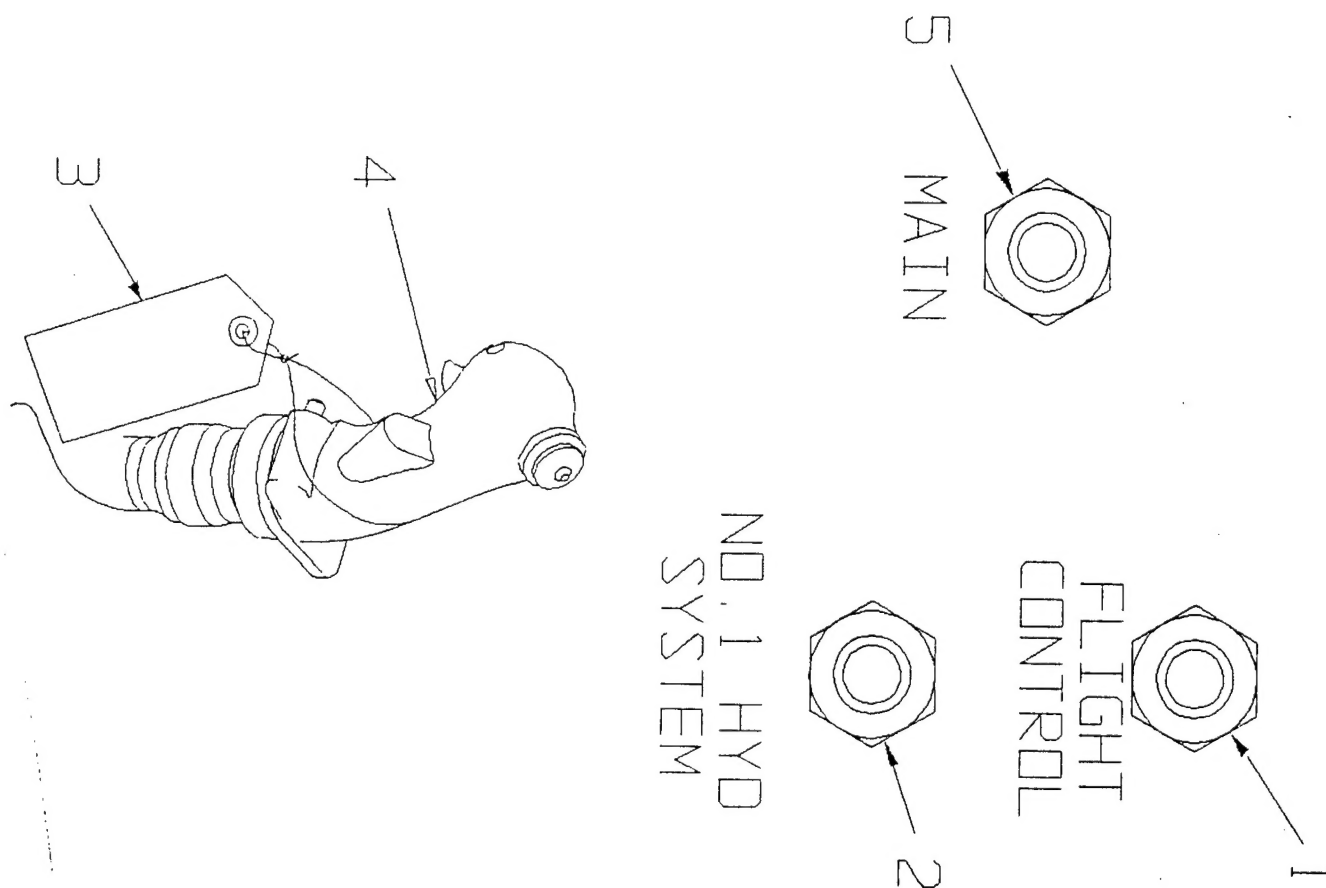2018: 1 Problems with line weight/width display information.

*** Error Summary ***

   0 fatal errors
   0 severe errors
   0 errors
   2 warnings
   1 cautions
   0 nitpicks
   1 notes

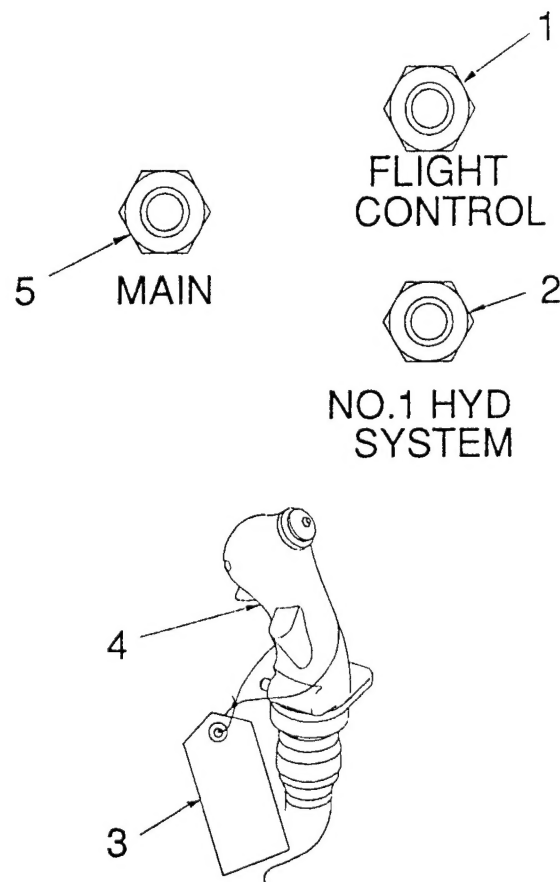*** End of Analysis of \9283\q006.igs ***
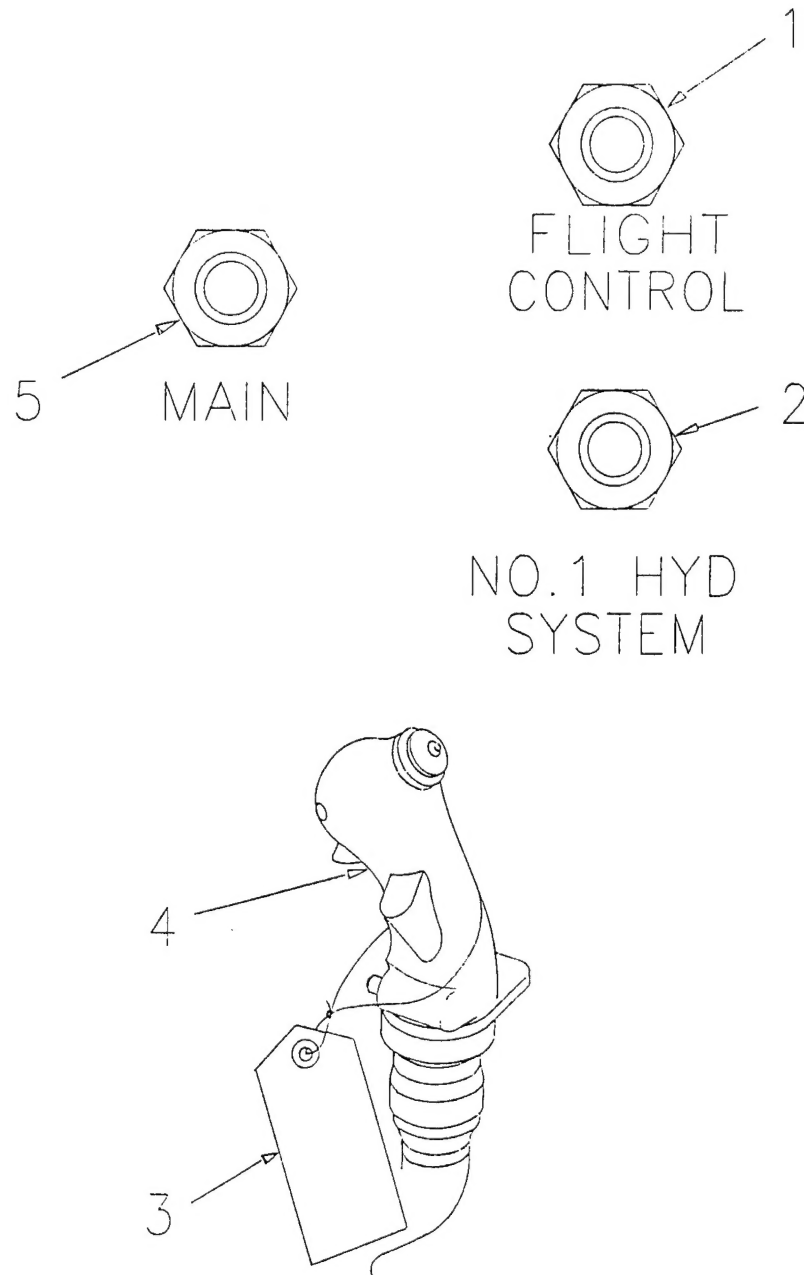
10.1.2   Output AutoCAD R11

10.1.3 Output Cadkey v4.06

10.1.4 Output IGESView

10.1.5 Output Preview

11. Appendix C - Detailed SGML Analysis

11.1 ArborText Parser Log

No reported errors.

11.2 Datalogics Parser Log

No reported errors.

11.3 Exoterica Parser

No reported errors.